

Appl. No. 10/756,054  
Amdt. dated February 22, 2005  
Reply to Office action of November 22, 2004

Replacement Sheet

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COLLECTING MULTIPLE SAMPLES WITH DIFFERENT AZIMUTH ANGLES IN THE LONGITUDINAL AND LATITUDINAL ORIENTATIONS USING TWO ORTHOGONAL MAGNETIC SENSORS, AND OUTPUTTING CORRESPONDING FIRST AND SECOND SINE WAVE SIGNALS (SX, SY).

ADJUSTING THE AMPLITUDES OF ONE OF THE TWO SINE WAVE SIGNALS (SX)(SY) SUCH THAT THE AMPLITUDES OF THE FIRST SINE WAVE SIGNALS (SX) AND THE AMPLITUDES OF THE SECOND SINE WAVE SIGNAL (SY) ARE OF EQUAL AMPLITUDE.

COMPARING THE SAMPLE VALUES IN EACH SET RESPECTIVELY REPRESENTED BY THE FIRST AND SECOND SINE WAVE SIGNALS (SX)(SY) TO GENERATE THE MAXIMUM AND MINIMUM VALUES (XMAX, XMIN) (YMAX, YMIN); AND COMPUTING THE AVERAGE VALUES (XBASE, YBASE) BASING ON THE MAXIMUM AND MINIMUM VALUES (XMAX, XMIN)(YMAX, YMIN) RESPECTIVELY

TAKING EACH OF THE AVERAGE VALUES (XBASE, YBASE) TO BE A ZERO REFERENCE FIRST AND SECOND SINE WAVE SIGNALS (SX, SY) RESPECTIVELY, TO PRODUCE REFERENCE FIRST AND SECOND SINE WAVE SIGNALS (RSX)(RSY), WHEREBY THE POSITIVE AND NEGATIVE SIDES OF THE REFERENCE SINE WAVE SIGNALS (RSX, RSY) ARE OF EQUAL AMPLITUDE.

Fig. 1

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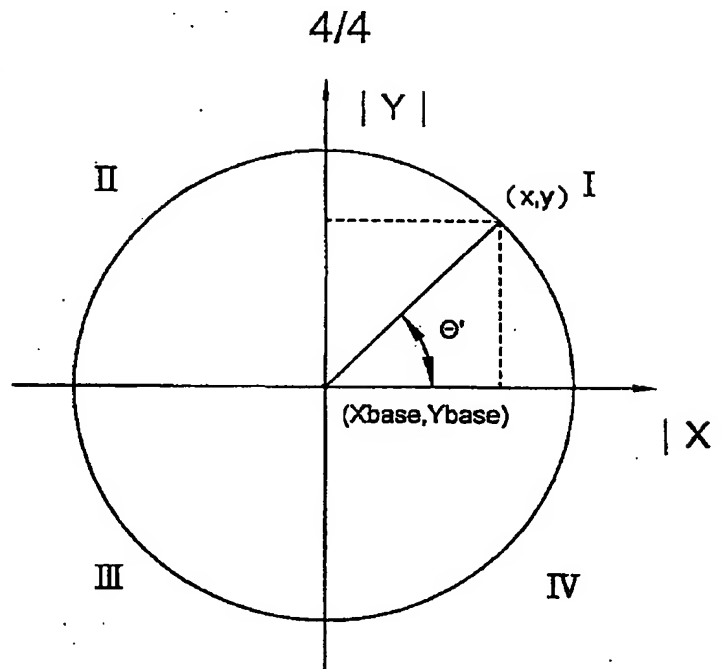


FIG. 4

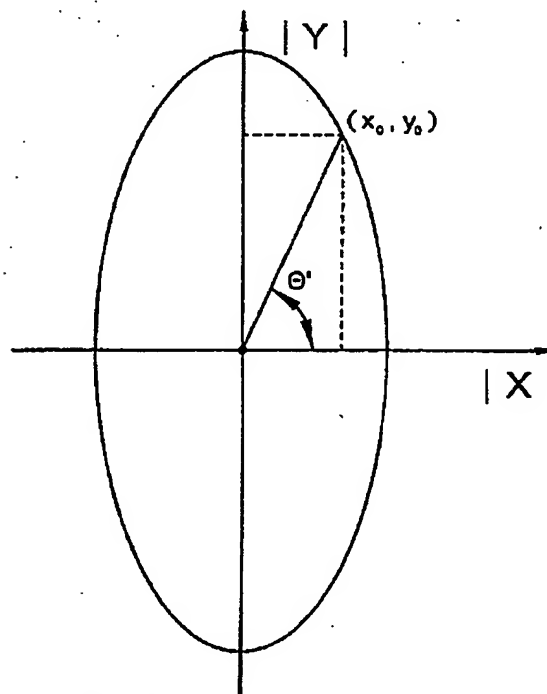


FIG. 5 PRIOR ART

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